Department of Energy
Brookhaven Area Office
P. O. Box 5000
Upton, New York 11973

MAR 26 2002

Ms. Loretta Cunniff
Brookhaven Science Associates, LLC
Brookhaven National Laboratory
Upton, New York 11973

Ms. Cunniff:

SUBJECT: NEPA DETERMINATION FOR THE BROOKHAVEN NATIONAL LABORATORY (BNL) CENTER FOR FUNCTIONAL NANOMATERIALS

We have reviewed the Environmental Evaluation Notification Form for the BNL Center for Functional Nanomaterials and have determined it to be a Categorical Exclusion. A copy of the determination is enclosed. If you should have any questions regarding this matter, please contact Caroline Polanish of my staff at extension 5224.

Sincerely,

Michael D. Holland
Area Manager

Enclosure:
As stated

cc: P. Siebach, TS, CH, w/encl.
M. Davis, BNL, w/encl.

ENVIRONMENTAL EVALUATION NOTIFICATION FORM

/Contractor Laboratory: BROOKHAVEN NATIONAL LABORATORY

/Activity Title: BNL Center for Functional Nanomaterials

Tracking No.: BNL-450 Type of Funding: LI

ie: Total Estimated Cost: $55,000,000

nizant Secretarial Officer (CSO): J. Decker, Acting SC-1

ctor Project Manager: J. Taylor Signature: John H Taylor

Date: 2/15/02

ctor NEPA Reviewer: M. Davis Signature: Mark C Davis

Date: 2/20/02

Description of Proposed Action:

roposed activity would construct and operate a two-story, thirty foot 78,400 square foot building to house BNL's Center for Functional terials. This facility would provide laboratory, clean rooms, office pport space for the program. The building footprint would be 39,200 feet located at the northwest corner of Brookhaven Avenue and Railroad . The building would be physically connected to Building 725 through a ting corridor and Building 535 through an overhead walkway enclosure. acility would provide space for the scientific staff from the mentation, Physics, National Synchrotron Light Source, Material Science hemistry Departments/Divisions. Paved parking areas northeast of ngs 725 and 535 would be expanded eastward over paved parking/maintained rea to provide parking for the facility.

oposed facility would contain five principal laboratories including a ission electron microscopy lab, electron beam lithography lab, laser optical microscopy lab and material synthesis lab. Lasers, transmission ect on microscope, and other x-ray equipment would be connected to closed loop cooling water systems supplied and maintained through the Central Chilled Water System. Some labs would contain fume hoods and ovens to support bench-scale activities including materials synthesis and wet chemical etching.

Description of Affected Environment:

k would take place on paved parking/maintained lawn area adjacent to gs 480 (Material Sciences), 535 (Instrumentation and NSLS Support) and SLS). No impacts to environmentally sensitive areas would be pated.

III. **Potential Environmental Effects**: (Attach explanation for each "yes" response, and "no" responses if additional information is available and could be significant in the decision making process.)

A. Sensitive Resources: Will the proposed action result in changes and/or disturbances to any of the following resources?

	Yes/No
1. Threatened/Endangered Species and/or Critical Habitats	N
2. Other Protected Species (e.g. Burros, Migratory Birds)	N
3. Wetlands	N
4. Archaeological/Historic Resources	N
5 Prime, Unique or Important Farmland	N
6. Non-Attainment Areas	N
7. Class I Air Quality Control Region	N
8. Special Sources of Groundwater (e.g. Sole Source Aquifer)	N
9. Navigable Air Space	N
10. Coastal Zones	N
11. Areas w/Special National Designation (e.g. National Forests, Parks, Trails)	N
12. Floodplain	N

B. Regulated Substances/Activities: Will the proposed action involve any of the following regulated substances or activities?

	Yes/No
13. Clearing or Excavation (indicate if greater than 5 acres)	Y
14. Dredge or Fill (under Clean Water Act section 404; indicate if greater than 10 acres)	N
Noise (in excess of regulations)	N
Asbestos Removal	N
PCBs	N
Import, Manufacture or Processing of Toxic Substances	N
Chemical Storage/Use	Y
20. Pesticide Use	N
21. Hazardous, Toxic, or Criteria Pollutant Air Emissions	Y
22. Liquid Effluent	N
23. Underground Injection	N
Hazardous Waste	Y
Underground Storage Tanks	N
26. Radioactive (AEA) Mixed Waste	N
27 Radioactive Waste	Y
28. Radiation Exposures	Y

C. Other Relevant Disclosures. Will the proposed action involve the following?

	Yes/No
29. A threatened violation of ES&H regulations/permit requirements	N
Siting/Construction/Major Modification of Waste Recovery, or TSD Facilities	N
31. Disturbance of Pre-existing Contamination	N
32. New or Modified Federal/State Permits	N
33 Public controversy (e.g. Environmental Justice Executive Order 12898 consideration and other related public issues.)	N
34. Action/involvement of Another Federal Agency (e.g. license, funding, approval)	N
35. Action of a State Agency in a State with NEPA-type law. (Does the State Environmental Quality Review Act Apply?)	N
36 Public Utilities/Services	N
37 Depletion of a Non-Renewable Resource	N

IV. **Section D Determination**: Is the project/activity appropriate for a determination by the Area Manager under Subpart D of the DOE NEPA Regulations for compliance with NEPA?

Yes

Indicate the recommendation and specific class of action from Appendix A-D to Subpart D (10 CFR 1021):

CX

B1.15 Siting/construction/operation of support buildings/support structures

And CX

B3.6 Siting/construction/operation/decommissioning of facilities for bench-scale research, conventional laboratory operations, small-scale research and development and pilot projects

DOE Recommendation:

BAO NEPA Coordinator: Caroline Polanish Signature: Caroline Polanish

Date: 3/18/02

LGL-GL: Irene P. Atney Signature: Irene P. Atney

Date: 3/22/02

Group Manager Subpart D CX Determination and Approval:

The preceding pages are a record of documentation required under DOE Final NEPA Regulation, 10 CFR Part 1021.400, to establish that an action may be categorically excluded from further NEPA review. I have determined that the proposed action meets the requirements for the Categorical Exclusion referenced above. Therefore, by my signature below, I have determined that the proposed action may be categorically excluded from further NEPA review and documentation.

BAO Area Manager: Michael D. Holland Signature: for MH

Date: 3/26/02

Section V: Additional Information

B13 Construction of the new building and associated parking facilities would convert approximately two acres of maintained lawn area into building footprint or paved parking area. In addition, temporary trenching would be conducted to connect utilities into the new facility. These areas would be returned to pre-project conditions.

B19 Laboratories would accommodate some wet chemistry including chemical etching at the microscopic level. This would require an inventory of chemicals on hand including organic solvents, organic and ionic acids and bases, and various polymers for materials synthesis. All chemicals would be present in small quantities and no area would exceed regulatory thresholds for Suffolk County.

B21 The new laboratory spaces would contain several operational fume hoods and ovens. The processes to be conducted in these hoods and ovens would be evaluated in accordance with New York State Air Emissions requirements. All air emissions would be expected to be limited to small quantities of acids, bases and solvents typical of research laboratory operations at BNL.

B24 Both electron and chemical etching of materials is contemplated in this new facility. Etching activities would generate small quantities of hazardous waste. Because etching is to be performed on a microscopic level, the quantity of hazardous wastes generated from operations in this building would not be expected to exceed 200 pounds annually.

B27 No use of radioactive materials is planned in the investigations now under consideration in this proposed facility. However, future investigations may require the use of these materials. Small quantities of radioactive waste could be generated under these circumstances. Projections on radioactive waste generation would be less than 10 pounds per year.

B28 Material sciences investigations would utilize standard x-ray equipment to evaluate materials. These machines could generate local exposures to workers within the laboratory. The labs would be posted and managed as radiation control areas in accordance with BNL practices.